

WHAT IS CLAIMED IS:

1. A laundry system comprising laundry equipment which comprises a plurality of laundry machines such as washing machines and dryers, and a laundry managing server for managing
5 the laundry equipment, wherein:

the laundry equipment comes into an operable state by receiving a signal for permitting operation thereof from the laundry managing server, and transmits operational information to the laundry managing server in response to operation of the
10 laundry equipment which has become operable; and

the laundry managing server comprises means for confirming validity of customer identification data when receiving the customer identification data along with specific information for identifying laundry equipment that the customer
15 desires to use from a portable communication tool of the customer and transmitting a signal to the laundry equipment that has been identified by the specific information so as to permit operation of the laundry equipment, and means for receiving the operational information from the laundry equipment and creating bill data
20 for charging the customer based on the customer identification data and the operational information.

2. The laundry system according to claim 1, wherein the laundry equipment includes a store controller (DTC) connected to the plurality of laundry machines by communication means, the
25 store controller has another communication means for

with the laundry managing server.

3. The laundry system according to claim 1, wherein the means for creating bill data memorize a billing amount based on the operational information of the customer for a prescribed
5 period, and create bill data based on aggregation of the billing amount for the prescribed period.

4. The laundry system according to claim 1, further comprising a carrier server capable of communicating with the laundry managing server,

10 the carrier server comprising:

a customer file for storing customer information;

means for writing a communication charge caused by the portable communication tool in the customer file each time when the portable communication tool transmits information;

15 means for writing bill data transmitted from the laundry managing server in the customer file as a laundry equipment usage rate; and

means for issuing a bill to the customer, the bill claiming a sum of the communication charge and the laundry
20 equipment usage rate.

5. The laundry system according to claim 4, wherein a server serves as both the laundry managing server and the carrier server.

6. The laundry system according to claim 4, further
25 comprising a bank computer under contract with the carrier server,

the bank computer comprising:

means for collecting the communication charge and the laundry equipment usage rate of the customer from a bank account of the customer by accessing the customer file of the carrier server; and

means for paying the collected communication charge to a bank account of a carrier and paying the collected laundry equipment usage rate to a bank account of an owner of the laundry equipment.

7. A laundry system comprising laundry equipment having a plurality of laundry machines for carrying out prescribed treatments including a washing machine for washing laundry and a dryer for drying laundry, and a laundry managing server for managing the laundry equipment, wherein:

means for transmitting a notice of completion of a prescribed treatment for the laundry in the laundry machine to a portable communication tool of a customer in response to the completion of the treatment.

8. The laundry system according to claim 7, further comprising:

means for transmitting a request for permission to unload the laundry to the portable communication tool of the customer for inquiring whether the laundry may be unloaded from the laundry machine, the transmission being carried out in response to a lapse of a prescribed time after the completion of the treatment for

the laundry, and

means for charging the customer based on receipt of a signal for prohibiting unloading of the laundry from the portable communication tool of the customer in response to the transmission of the request for permission to unload the laundry, or based on absence of response from the portable communication tool of the customer.

9. The laundry system according to claim 7, wherein the request for permission to unload the laundry includes data for permission and prohibition as data available for the customer's response so that either response is selected by the portable communication tool of the customer so as to be automatically transmitted to the laundry system.

10. The laundry system according to claim 9, wherein the transmission to the portable communication tool of the customer is carried out by means of characters and/or figures information.

11. The laundry system according to claim 1, wherein the laundry equipment being capable of communicating with the portable communication tool of the customer by the first specified low-power, short-range radiocommunication means, while the portable communication tool of the customer being capable of transmitting contents of the communication with the laundry equipment to the laundry managing server by the second radiocommunication means other than the first specified low-power radiocommunication means.

12. The laundry system according to claim 11, wherein:

the data to be transmitted from the laundry equipment to the portable communication tool of the customer by the first radiocommunication means include information for identifying the laundry equipment;

the portable communication tool of the customer transmits the information for identifying the laundry equipment received from the laundry equipment to the laundry managing server by the second radiocommunication means; and

the laundry managing server identifies the laundry equipment to be used by the customer based on the information transmitted thereto.

13. The laundry system according to claim 11, wherein:

the portable communication tool has a GPS antenna so as to identify positional information of the portable communication tool by receiving a signal from the GPS antenna; and

the laundry managing server identifies the laundry equipment to be used by the customer based on the positional information of the portable communication tool transmitted from the portable communication tool owned by the customer.

14. The laundry system according to claim 11, wherein:

the laundry machine has identification for identifying itself;

the laundry machine further comprises:

the first specified low-power, short-range

radiocommunication means;

first judgment means for judging whether the machine is operable or not when the first radiocommunication means receive identification information from a portable communication tool;

5 means for indicating an operable condition of the machine and transmitting a response by the first radiocommunication means permitting operation of the machine based on a judgment of the first judgment means determining that the machine is operable;

10 second judgment means for judging whether operational information permits operation of the machine or not when the first radiocommunication means receives the operational information as a result of the transmission of the response permitting operation of the machine; and

15 means for starting operation of the machine based on a judgment of the second judgment means determining that the machine is operable, and transmitting the operational information from the first radiocommunication means.

20 15. A laundry managing server for the laundry system according to claim 1, comprising:

a customer file memorizing at least customer identification data that have been predetermined between the laundry managing server and a customer;

25 means capable of communicating with the laundry equipment and a portable communication tool owned by the customer

for transmitting a signal for permitting operation to the laundry equipment that has been identified by information for identifying the laundry equipment that the customer desires to use, the transmission being carried out in response to receipt
5 of the customer identification data and the information for identifying the laundry equipment transmitted from the portable communication tool of the customer;

means for receiving operational information transmitted from the laundry equipment when the laundry equipment is driven
10 to operate; and

means for storing the received operational information in the customer file by summing up the operational information by customer, and outputting the operational information as a laundry equipment usage rate of the customer at prescribed
15 periods.

16. The laundry system according to claim 2, wherein:

each of the plurality of the laundry machines comprises information given thereto for identifying the laundry machine, an operable condition indicator, an operation part, and
20 controlling means for driving the machine to operate upon input of an operation signal caused by operation of the operation part while the indicator indicates an operable condition, and then outputting operational information at the time to the store controller via the communication means; and

25 the store controller comprises external communication

means, means for bringing the laundry machine into an operable condition upon receipt of information for identifying the laundry machine along with a signal for permitting operation thereof, and means for transmitting the operational information inputted from the laundry machine by the external communication means.

17. A portable communication tool necessary for using a desired laundry machine of the laundry system according to claim 1, comprising:

10 means for requesting input of a predetermined password;
means for requesting input of identification information for identifying the laundry equipment and the laundry machine;
and
communication means for transmitting the password and
15 the identification information that have been inputted by radiocommunication.

18. The portable communication tool according to claim 17, wherein the communication means receive at least a signal informing whether the password has been verified or not after
20 transmitting the password.

19. The portable communication tool according to claim 17, further comprising:

second communication means for transceiving signals by prescribed low-power, short-range radiocommunication which is
25 different from aforementioned radiocommunication; and

means for transmitting inputted operational information of the laundry machine in response to receipt of verification of the password by the second communication means.

20. The portable communication tool according to claim 5 19, further comprising transmission control means for transmitting the operational information of the laundry machine by aforementioned communication means that are different from the second communication means when the second communication means receive the operational information of the laundry machine as a response to the transmission of the operational information.

21. A control program for the laundry managing server of the laundry system according to claim 1, wherein: the laundry managing server having a customer file which memorizes user identification data that have been predetermined between the 15 server and a user, wherein

the control program comprises the steps of:

determining whether user identification data are valid or not upon receipt of the user identification data by referring to the user identification data memorized in the customer file;

20 transmitting a signal for permitting operation of laundry equipment upon verification of the user identification data to the laundry equipment identified by specific information for identifying the laundry equipment that the user desires to use, the specific information being received in relation to the 25 user identification data;

receiving operational information transmitted from the laundry equipment when the laundry equipment is driven to operate;

storing the received operational information in the customer file by linking it to the user identification data; and

calculating a laundry equipment usage rate of the user by summing up the operational information memorized in the customer file at prescribed periods.

22. A memory device for using a computer system in which stored with the program specified in claim 21.

23. A method of using a laundry system by means of a portable communication tool, wherein:

the portable communication tool transmits customer identification data along with specific information for identifying laundry equipment that the customer desires to use;

a laundry managing server receives the customer identification data from the portable communication tool, and transmits a signal for permitting operation to the laundry equipment that has been identified by the specific information upon verifying validity of the customer identification data;

the laundry equipment that has received the signal for permitting operation thereof comes into an operable state, and transmits operational information to the laundry managing server in response to operation of the laundry equipment that has become operable; and

the laundry managing server that has received the operational information creates bill data of the customer based on the user identification data and the operational information.

received data